renewable resources that can help meet the energy demands of a world now numbering six billion people. Ironically, plants and trees are once again being valued as raw material for energy production because they contain an enormous store of energy freely delivered by the sun.

Using nature's renewable raw material for production of needed fuels, chemicals and energy is not a new idea. What is new, however, is a better understanding of chemistry and molecular biology which has led to the development of advanced biotechnologies and processing techniques for efficiently converting plants to energy. With these advances, it is now possible to envisage a future where the world's thirst for additional sources of energy is fueled by biomass.

Biobased fuels are our best means of reducing American dependence on imported oil. Reliance on the unstable states of the Middle East adversely impacts American strategic security, and massive oil imports skew our balance of payments. Fuels and chemicals derived from biomass will reduce our dependence on Middle Eastern oil without necessitating a rebuilding of the existing gasoline infrastructure. With the need for affordable energy rising as population grows, the Middle East will control nearly three-quarters of the world's oil this century. We have stark options: submit to increased influence of foreign oil cartels; wrangle over pipeline routes to new oil supplies at the ends of the Earth, such as the Caspian region; or, support research that could lead to a revolution in the way we produce energy.

In addition to fuels, biobased chemicals have the potential to replace essentially all chemicals currently derived from petroleum, and they are often endowed with superior performance characteristics. The manufacturing of biobased products is generally more environmentally friendly than analogue petrochemical processes.

Fuels, cloth fibers, plastics and adhesives are already produced from corn; the new genetic engineering techniques will make it possible to use entire plants, rather than just the tiny portion of edible grains. With sound land use policies, local crops that enrich the soil, prevent erosion and improve local environmental conditions can be planted and then harvested for co-production of food, fuel, chemicals, electricity and materials. Rural communities will be strengthened through the diversification of marketable agricultural products and farmers will have expanded sources of income.

Before we are able to reap the outstanding benefits offered through utilization of America's sustainable biomass resource, costs of the new conversion technology must be significantly reduced. Research offers the only systematic means for creating the innovations and technical improvements that will lower the costs of biomass processing. Given the relatively short-term horizon characteristic of private sector investments, and because many benefits of biomass processing are in the public interest, the Federal government has a compelling mandate to fund the necessary innovation-driven research that will result in cost effective technologies for biomass conversion.

Although government sponsored research programs have been largely responsible for demonstrating the potential of biomass conversion technology, coordination among key Federal agencies is disjointed and funding levels are declining. The Biomass Research and Development Act is designed to address these shortcomings. America's leading technical experts from universities, national laboratories and the private sector will be brought together in a dynamic research initiative with the purpose of overcoming technical barriers to low cost biomass conversion.

At a time when political compromise seems elusive and progress on environmental and energy issues often seems slow, I am convinced that the idea of encouraging human ingenuity to create a sustainable resource for clean fuels and chemicals represents a remarkable opportunity for consensus. Working together we can promote research that will improve our national security and balance of payments, reduce greenhouse gas emissions and strengthen rural economies.

Mr. President, I would like to take this opportunity to thank Dr. Joseph Michels, my science policy adviser, for the excellent advice he has provided me on this issue. Dr. Michels is leaving my staff to assume an important post at Princeton University. I shall miss him.

I urge my colleagues to support this bill.

JURISDICTIONAL CLARIFICATION

• Mr. LUGAR. I would like to enter into a colloquy with my distinguished colleague, Senator MURKOWSKI, Chairman of the Energy and Natural Resources Committee. I want to inform my colleague that any action taken by the Committee on Agriculture, Nutrition, and Forestry in relation to S. 935 is not an attempt to encroach on the jurisdiction of the Committee on Energy and Natural Resources. Further, the fact that S. 935 was reported from the Committee on Agriculture, Nutrition, and Forestry does not affect the jurisdiction of the Committee on Energy and Natural Resources over energy matters, including biofuels and bioenergy. Specifically, USDA biomass research and development programs remain within the jurisdiction of the Committee on Agriculture, Nutrition, and Forestry and DOE biomass research and development programs remain within the jurisdiction of the Committee on Energy and Natural Resources.

Mr. MURKOWSKI. I thank my colleague, the Chairman of the Agriculture, Nutrition, and Forestry Committee, for addressing this matter and clarifying our understanding that this legislation does not alter the jurisdiction of the Committee on Energy and Natural Resources.

I would also like to note that the authorization of appropriations contained in section 3 of S. 935 clarifies that money may be appropriated for the biomass research and development activities described in the bill pursuant to the existing general authority of the Secretary of Energy to fund biomass research and development, and does not create a new specific level of authorization for this program.

Mr. LUGAR. I agree and thank the Senator from Alaska.•

Mr. CRAPO. Mr. President, I ask unanimous consent that the amendment be agreed to, the committee substitute, as amended, be agreed to, the bill be read the third time and passed, the amendment to the title be agreed to, the motion to reconsider be laid upon the table, and that any statements relating to the bill appear at this point in the RECORD.

The PRESIDING OFFICER. Without objection, it is so ordered.

The amendment (No. 2862) was agreed to.

The committee amendment, as amended, was agreed to.

The bill (S. 935), as amended, was read the third time and passed.

The title was amended so as to read:

To authorize research to promote the conversion of biomass into biobased industrial products, and for other purposes.

ORDERS FOR WEDNESDAY, MARCH 1, 2000

Mr. CRAPO. Mr. President, I ask unanimous consent that when the Senate completes its business today, it adjourn until the hour of 9:30 a.m., Wednesday, March 1. I further ask consent that on Wednesday, immediately following the prayer, the Journal of the proceedings be approved to date, the morning hour be deemed to have expired, the time for the two leaders be reserved for their use later in the day, and the Senate resume debate on the pending Robb amendment to S. 1134, the education savings account bill.

The PRESIDING OFFICER. Without objection, it is so ordered.

PROGRAM

Mr. CRAPO. Mr. President, for the information of all Senators, the Senate will resume consideration of the Robb amendment regarding school construction at 9:30 a.m. tomorrow. Following 30 minutes of debate, at approximately 10 a.m., the Senate will proceed to a vote on or in relation to the amendment. Senator ABRAHAM's amendment regarding computers will be introduced following the Robb vote. Other amendments will be offered and debated during tomorrow's session and therefore Senators can expect votes throughout the day.

Senators should be aware that an agreement to have all first-degree